



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/775,886

02/10/2004

Naoto Matsunami

81940.0070

1418

26021 7590 08/10/2006

HOGAN & HARTSON L.L.P.  
500 S. GRAND AVENUE  
SUITE 1900  
LOS ANGELES, CA 90071-2611

EXAMINER

PATEL, KAUSHIKKUMAR M

ART UNIT

PAPER NUMBER

2188

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                       |   |  |
|------------------------------|---------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/775,886  | <b>Applicant(s)</b><br>MATSUNAMI ET AL. |  |
|                              | <b>Examiner</b><br>Kaushikkumar Patel | <b>Art Unit</b><br>2188                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 28-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/26/2006, 3/28/06</u> | 6) <input type="checkbox"/> Other: _____   |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on May 26, 2006 is too voluminous. Examiner has only considered portions IDS based on relevant pages of the cited Non-Patent documents provided in remarks section of applicant's communication filed on May 26, 2006.

### ***Response to Amendment***

3. This office action is in response to applicant's communication filed on May 26, 2006 in response to PTO office action mailed February 23, 2006. The applicant's remarks and amendments to the claims were considered with the results that follow.
4. In response to the last office action, applicant has canceled claims 1-27. New claims 28-53 have been added. As a result, claim 28-53 remain pending in this application.

### ***Claim Objections***

5. Claims 36, 38, 49 and 51 are objected to because of following informalities:

Art Unit: 2188

Acronyms (such as NFS, CIFS in above claims) should not be used to abbreviate key terms or phrases until they are explicitly defined previously within the claim or a claim to which it depends. An acceptable correction would be for example in claim 36, "common internet file system (CIFS)" and "network file system (NFS)".

6. Applicant is advised that should claims 28, 31 and 41, 44 found allowable, claims 29, 30, 39, 40, 42, 43, 52 and 53 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof (claims 29, 30, 39 are duplicates of claim 28, claim 40 is duplicate of claim 31, claims 42, 43, 52 are duplicates of claim 41, and claim 53 is duplicate of claim 44). When two claims in an application are duplicates or else so close in content that they both cover same thing, despite a slight difference in wording, it is proper after allowing one claim and to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 28-53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to

Art Unit: 2188

which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As per claims 28, 39, 41 and 52, the limitations “a plurality of policies including conditions of file migration are prepared by a plurality of software programs”, “determining policies, which are used for migrating a file by a plurality of software programs” and “information indicating which one of the plurality of software programs determines the one of the policies applied to the migrated file” are not described in the specification. Careful review of specification revealed that the user or the application that created the file apply the policies to files (see specification page 22, lines 16-18). There is no disclosure of how these policies are created and applied to the files by the software that created the files. According to the fig. 11 and related description in specification of present application, the application, which created a file, is kept as an attribute of the file with the file metadata.

### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

10. Claim 28 recites the limitations “a file access request”, “a file”, “the file access request”, “a file” and “the file” in lines 12-13, 17 and 19. There is insufficient antecedent basis for these limitations in the claim.

Art Unit: 2188

Claim 39 recites the limitations "a file", "a file access request", "a file", "the received file access request" and "a file" in lines 6, 9-10, 12 and 14. There is insufficient antecedent basis for these limitations in the claim.

Claim 41 recites the limitations "a file", "a file access request", "a file", "the file access request" and "a file" in lines 6 and 12-13. There is insufficient antecedent basis for these limitations in the claim.

Claim 52 recites the limitations "a file", "a file access request", "a file", "the received file access request", "a file" and "the file" in lines 4 and 8-11. There is insufficient antecedent basis for these limitations in the claim.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 28-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al. (US 2004/0039891 A1) and further in view of Collins et al. (US 2003/0065873 A1) and Noveck et al. (US 6,757,695 B1).

As per claims 28-30, 39, 41-43 and 52, Leung teaches a file migration method between a first system and second system (Leung teaches storage environment comprising multiple servers coupled to one or more storage units and also using

Art Unit: 2188

hierarchical storage management using source and target storage units, par. [0007]-[0010]),

Wherein a plurality of policies including conditions of file migration are prepared by a plurality of software programs (Leung teaches different policies such as, cost of storage, par. [0038], based on file age, type and other attributes, par. [0060], based on importance of file, access patterns, access times, owner of the file etc. par. [0100] and based on these policies, the policy management engine (PME, which can be software, par. [0102]) moves data from source storage to target storage, par. [0106]);

the file migration method comprising steps of:

(a) finding a file, which satisfies a condition of one the plurality of policies, in the first file system (par. [0056]-[0060]);

(b) migrating the file, which satisfied the condition of the one of the plurality of policies, from the first system to the second system (par. [0062]); and

(c) leaving information indicating a migration destination of the migrated file and information (Leung teaches that migration of file involves moving a file from its original location on a source storage unit to a target storage unit. A stub or tag file may be stored on the source storage unit in place of migrated file. The stub file generally comprises metadata related to the migrated file and information that can be used to determine the target storage location of migrated file (par. [0027]).

Leung fails to teach leaving information of the program that created the file. Collins teaches grouping files that needs to be migrated according to different attributes such as application that created the file (par. [0031]). It would have been obvious to one

Art Unit: 2188

having ordinary skill in the art at the time of the invention to use creator (application created the file) of the file as an attribute to group files that needs to be migrated as taught by Collins in the system of Leung because grouping file based on different attributes provides user to make well informed and quick decision of which files needs to be migrated (par. [0005]) and where (target location) (see, par. [0027], Leung teaches stub file provides information of proper target location).

With respect remaining limitations from preamble of claim, first and second file access controllers, plurality of magnetic disks and file systems, Leung teaches, hierarchical storage system, RAID storage system, NAS and SAN systems with physical and logical storage units (par. [0031]-[0032]) and networked system (par. [0034]). Controlling an access to files using file access controller and creating logical units on a plurality of disks is known in the art (see Novack teaches system as described in preamble of the claim, figs. 1 and 2, and their related description). Arranging storage system as taught by Novack provides reliable, stable and redundant system (see Noveck, col. 4, lines 43-52).

As per claim 31, 40, 44 and 53, Leung teaches logical and physical storages with volumes (par. [0031]-[0033]) and moving files from one volume to other volume inherently teaches moving from one logical unit to other logical unit.

As per claims 32-33, 35, 45-46 and 48, Leung teaches leaving a stub file with metadata (file name, file size, file type and access permissions are known metadata of the file) and destination location of migrated file (par. [0027], [0089], [0107]), which inherently teaches leaving a file name in the source storage (renaming a file in



Art Unit: 2188

destination storage do not provide any advantage or improvement of the prior art, but instead requires more metadata and hence not given any patentable weight).

As per claims 34 and 47, Leung teaches file I/O driver module intercepting file requests from users and determines location of migrated file and file I/O driver restores the file (par. [0110]-[0111]). Intercepting and restoring file inherently requires sending access request to second file access controller because migrated file resides on second storage unit.

As per claims 36 and 49, Leung fails to teach NFS or CIFS, but his file migration method can be implemented on storage area networks (SAN) or network storage systems (NAS) (par. [0031]). NFS or CIFS are well known protocols allow users to access and share files and directories on a network as if they were local (see Edsall et al. US 2004/0139167 A1, par. [0006], Edsall teaches NAS with NFS and CIFS is known in the art). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize NFS or CIFS protocol in the system of Leung to allow users seamless access to files and directories.

As per claims 37 and 50, Leung teaches migrating file from source storage unit to target storage units as explained above in claim 28, which inherently requires reading file from source storage and writing it into destination storage.

Claims 38 and 51 are rejected under same rationales as applied to claims 36 and 49 above.

Art Unit: 2188

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaushikkumar Patel whose telephone number is 571-272-5536. The examiner can normally be reached on 8.00 am - 4.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
kmp

Kaushikkumar Patel  
Examiner  
Art Unit 2188

  
8/7/06

**MANO PADMANABHAN**  
**SUPERVISORY PATENT EXAMINER**